



# Biliary system

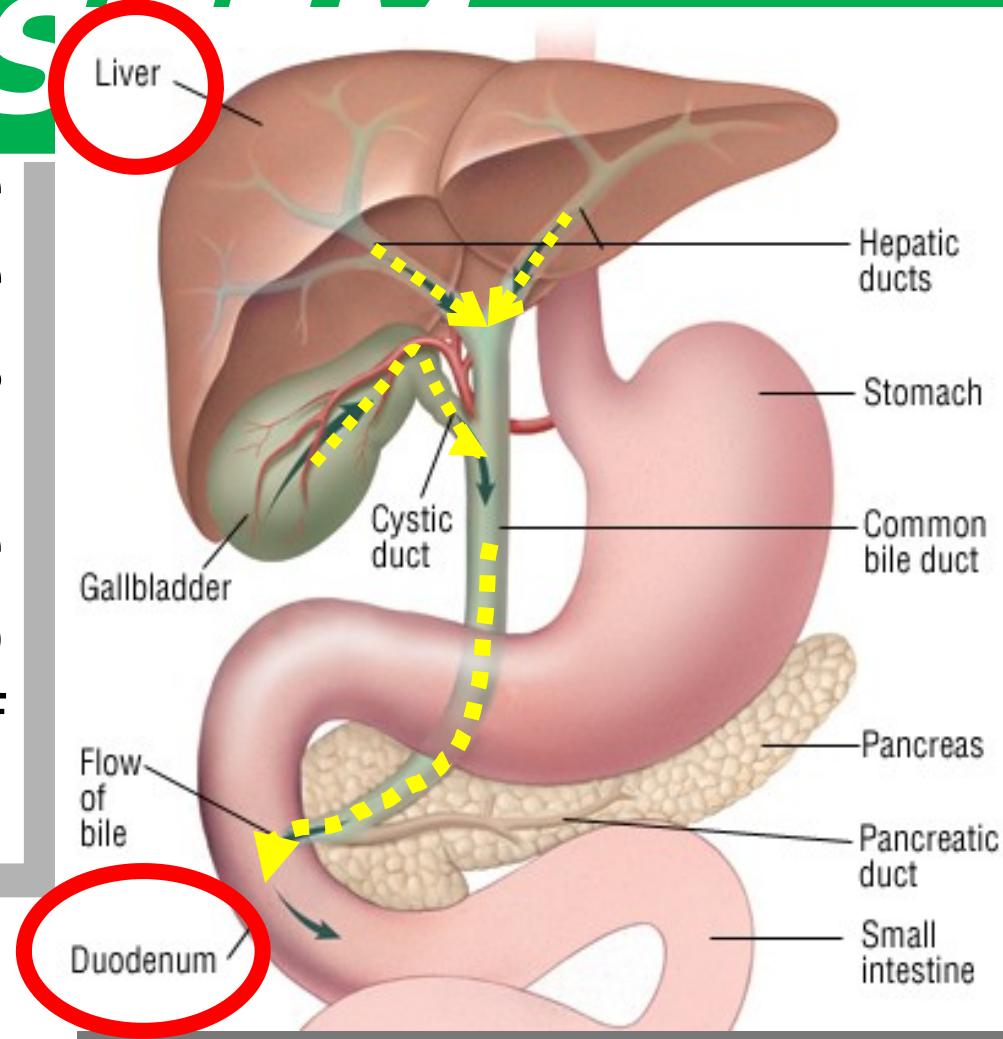
# INTENDED LEARNING OBJECTIVES (ILO)



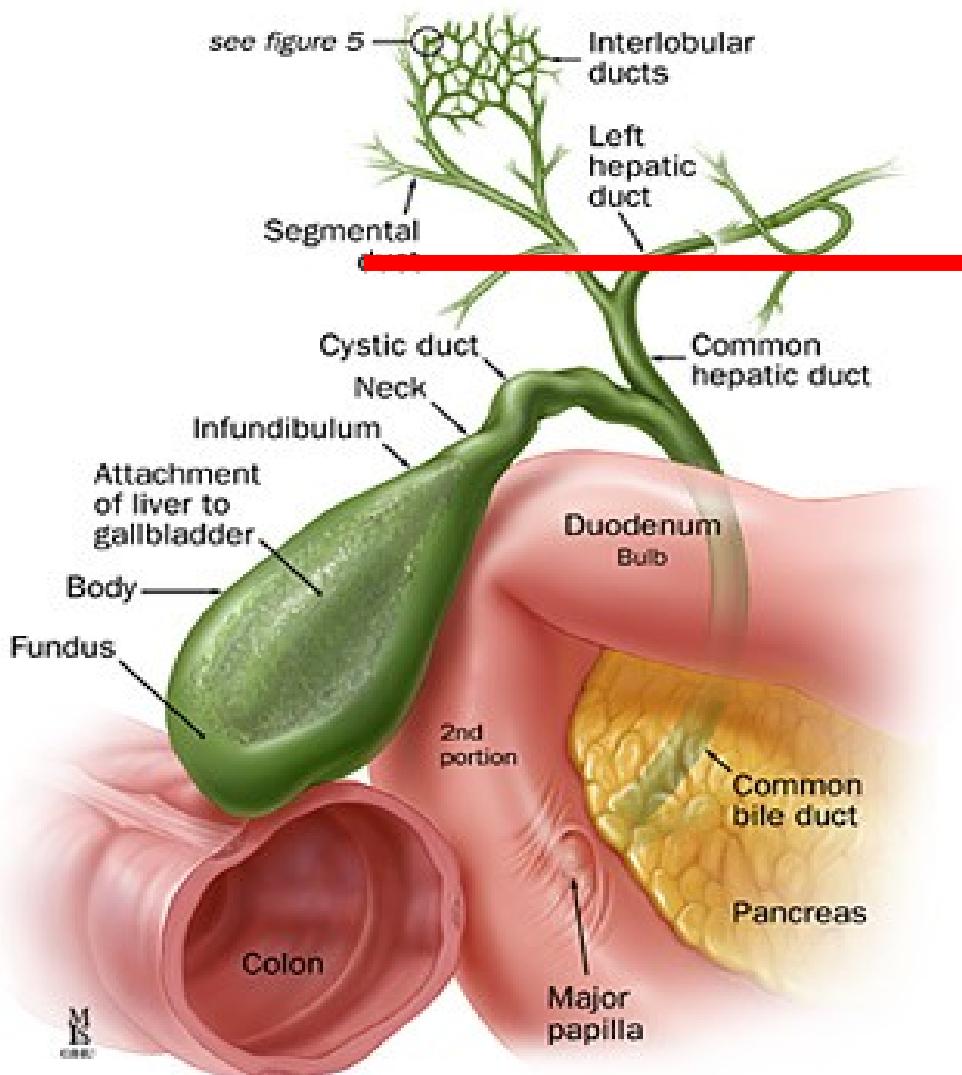
- Describe parts of gall bladder,
- Describe surface anatomy of its fundus
- Enumerate its blood supply.
- Comment on referred pain from gall bladder disease.
- Describe the extra-hepatic biliary passages

# THE BILIARY SYSTEM

The biliary tree consists of the system of ducts which collect and deliver bile from the liver parenchyma to the second part of the duodenum



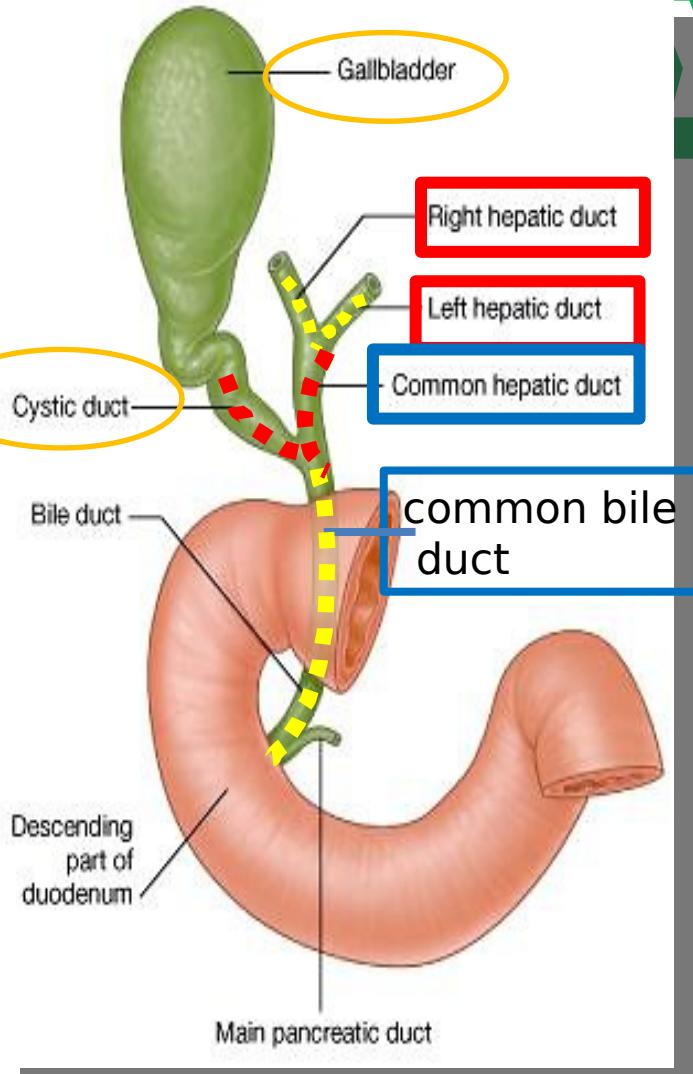
# THE BILIARY



## 1-Intrahepatic biliary tree

## 2-Extrahepatic biliary tree

# THE BILIARY SYSTEM

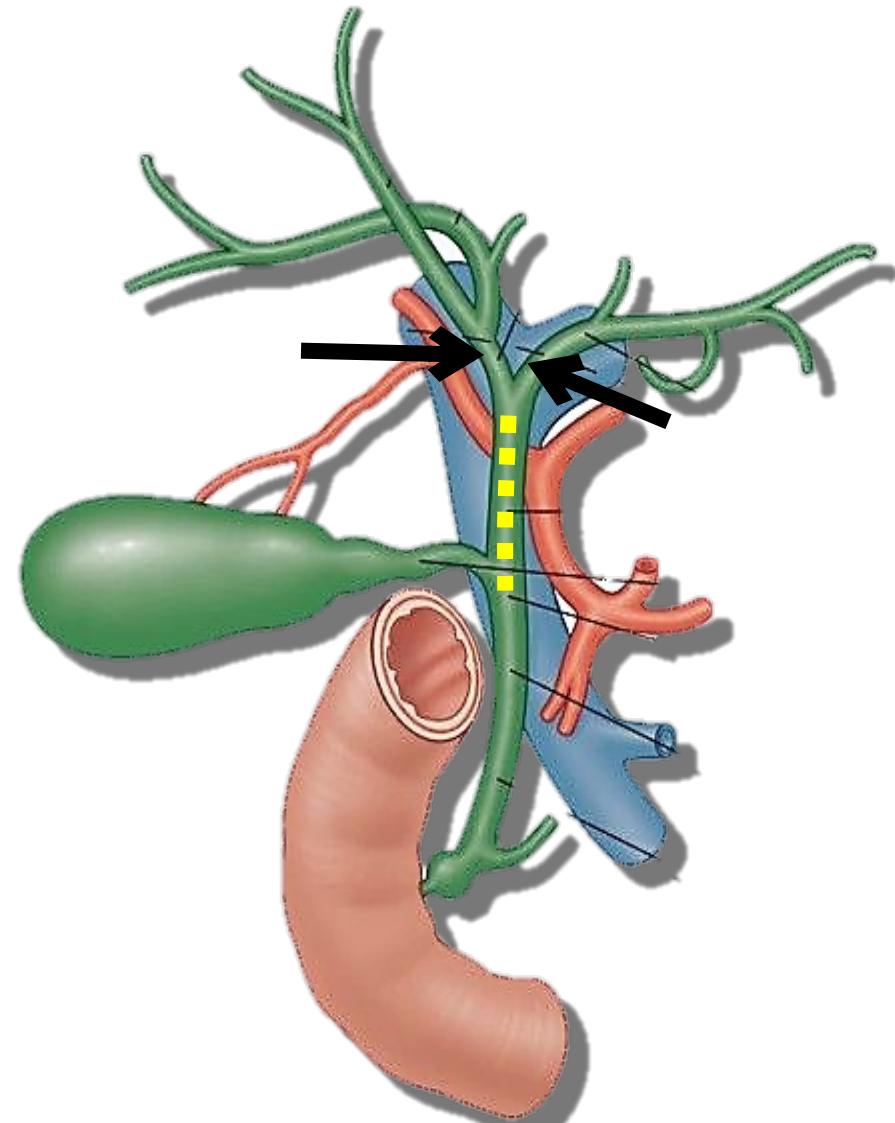


## Extrahepatic biliary tree

- right and left hepatic ducts,
- the common hepatic duct
- Gall bladder and cystic duct
- the common bile duct

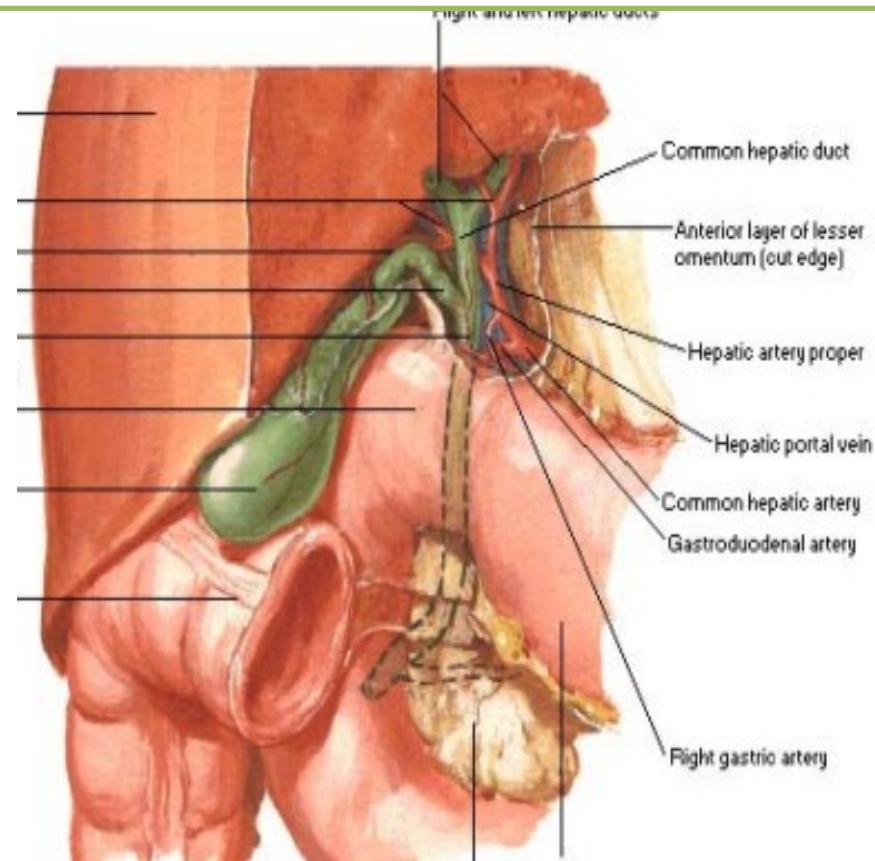
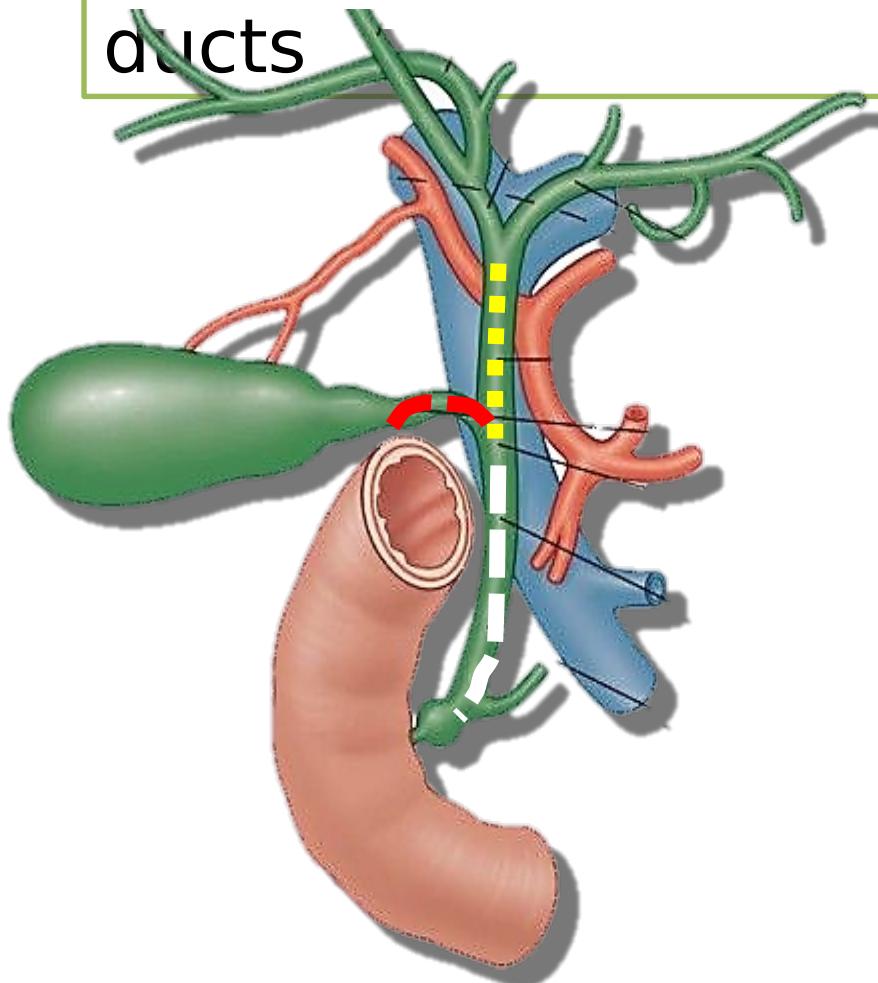
# Common Hepatic Duct

It is formed by The union of right and left hepatic ducts near the porta hepatis.



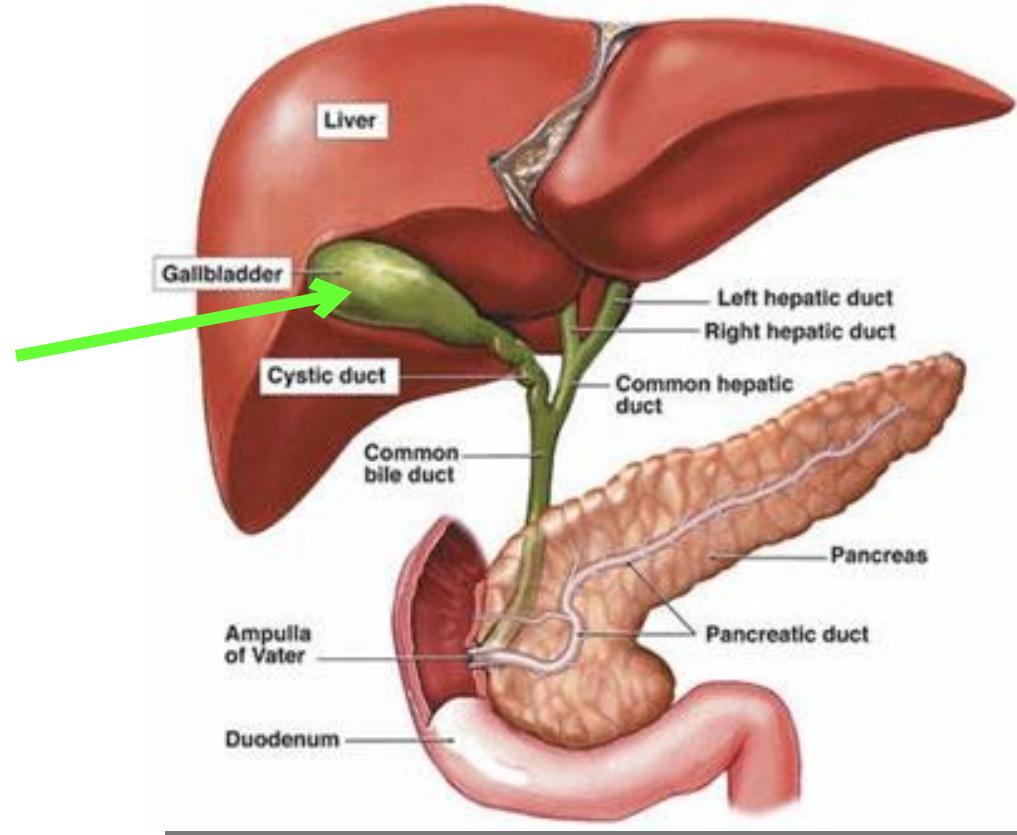
# Common Bile duct

It is formed near the porta hepatis by the junction of the cystic and common hepatic ducts



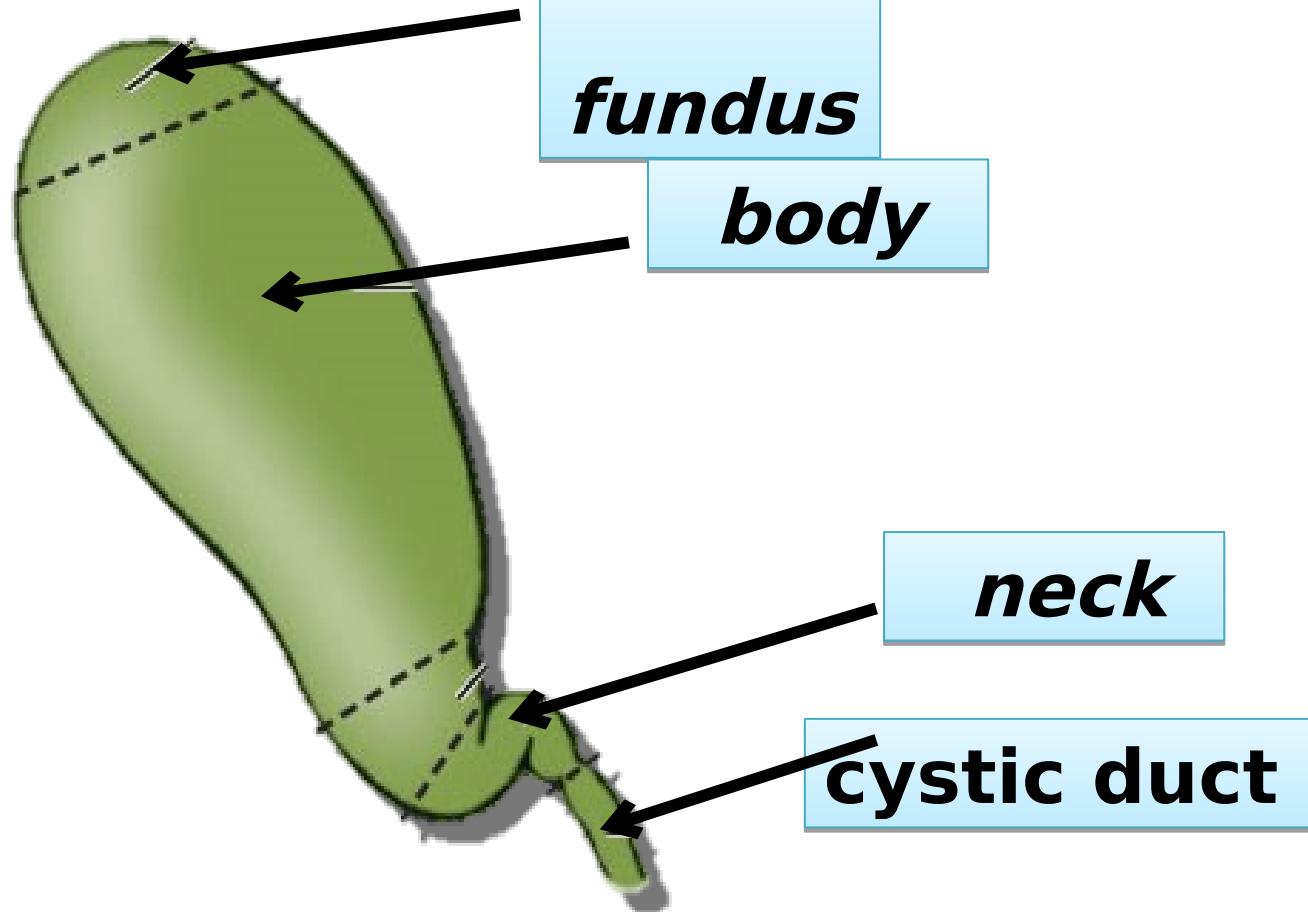
# *Gall bladder*

Site: partly in a fossa on the inferior surface of liver.



# ***Gall bladder***

***Parts of the gall bladder***



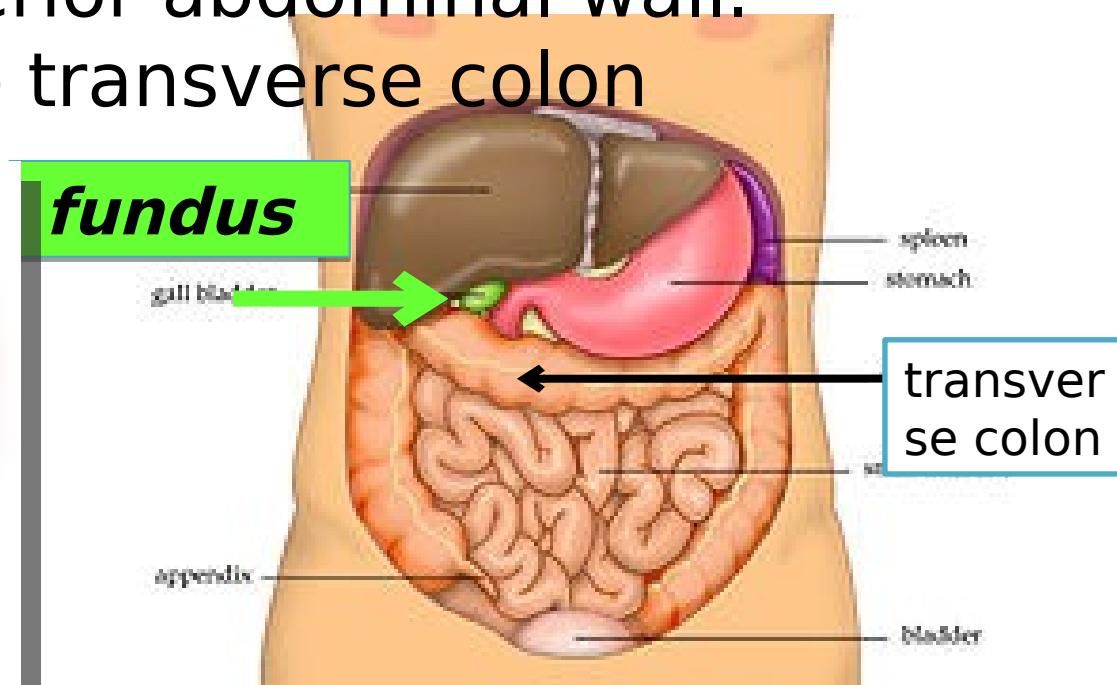
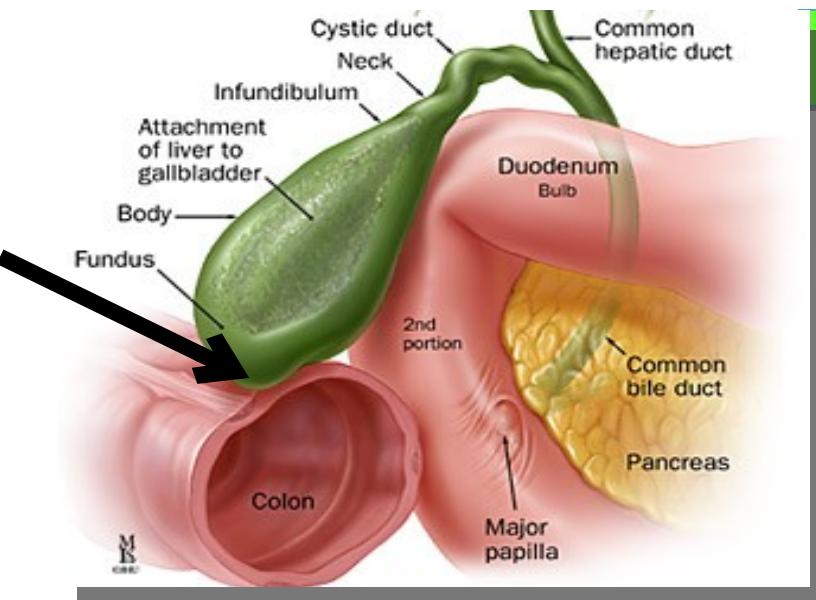
# Gall bladder

## **The fundus :**

- o It is the expanded end projects downward
- o it extends beyond the inferior border of the liver

**Anteriorly:** to anterior abdominal wall.

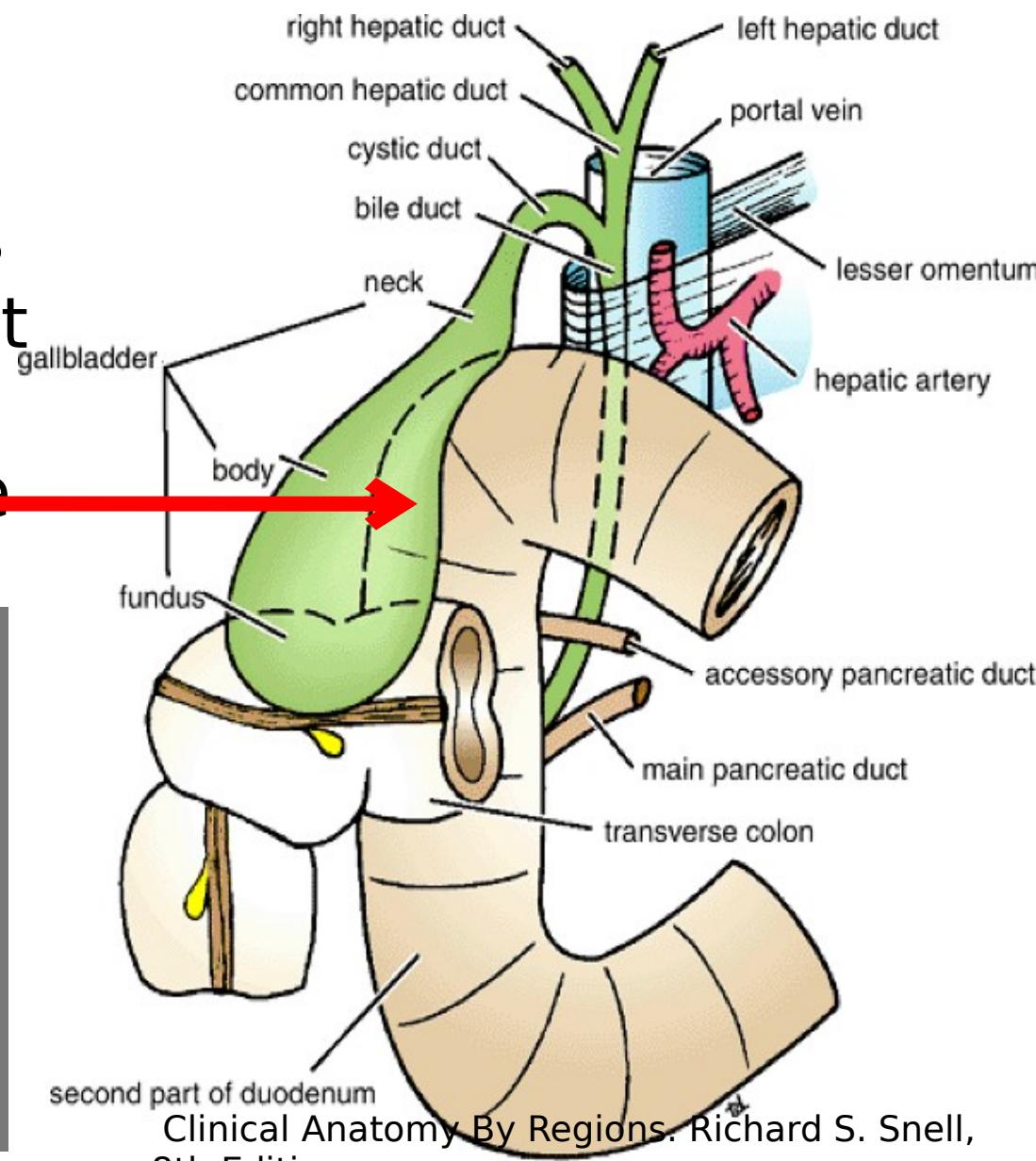
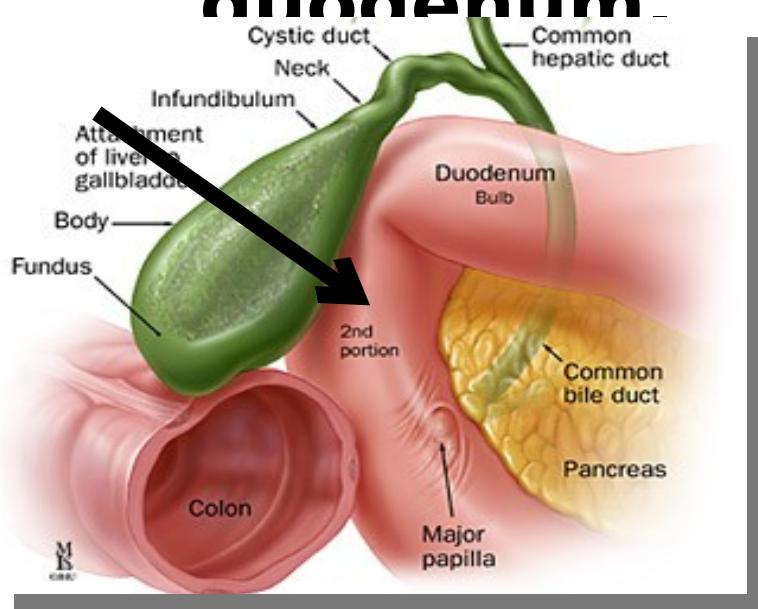
**Posteriorly:** to the transverse colon



# Gall bladder

## The body of gall bladder:

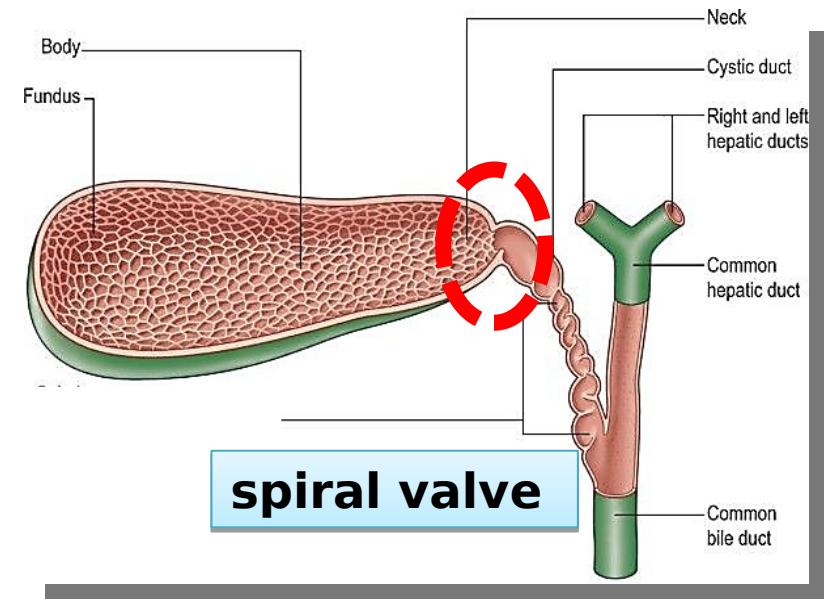
- o is directed upwards
- o Anteriorly in contact with the liver
- o Posteriorly: with the **duodenum**



# Gall bladder

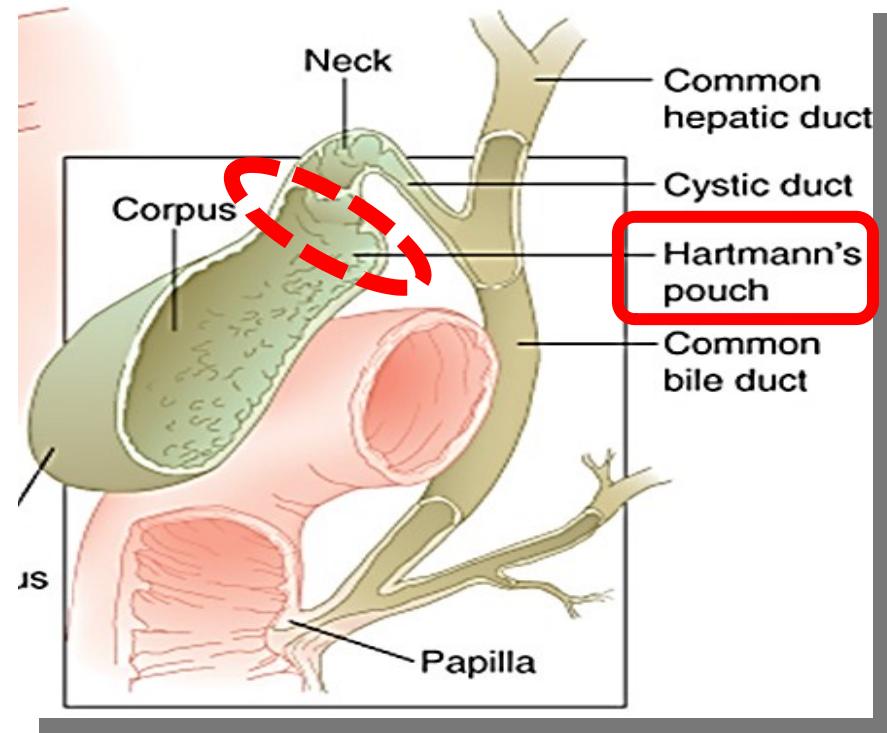
## The neck of gall bladder :

is the narrow part which follows the body. continuous with the **spiral valve** of the **cystic duct** .



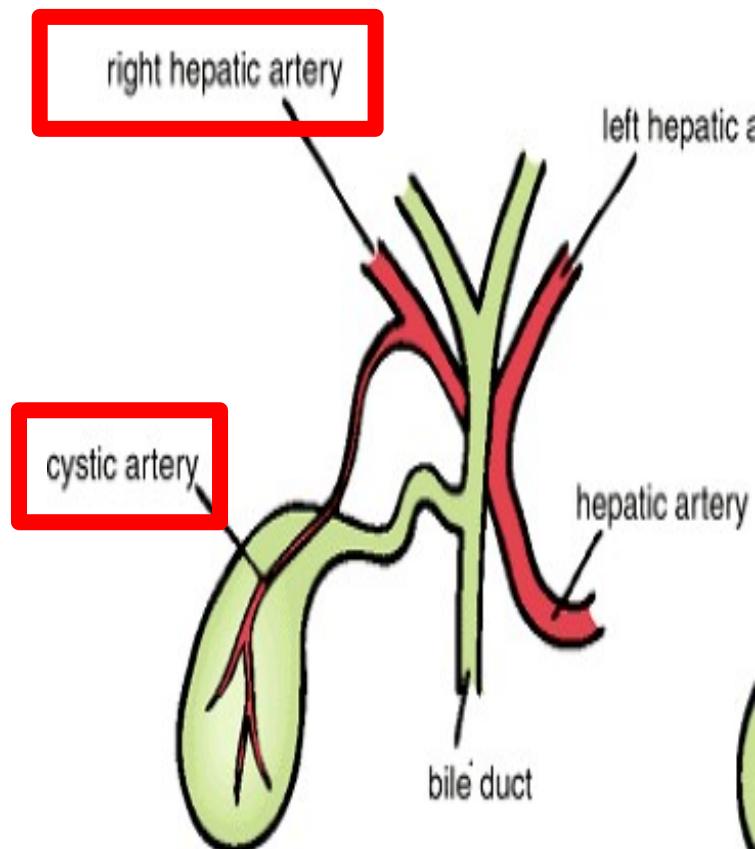
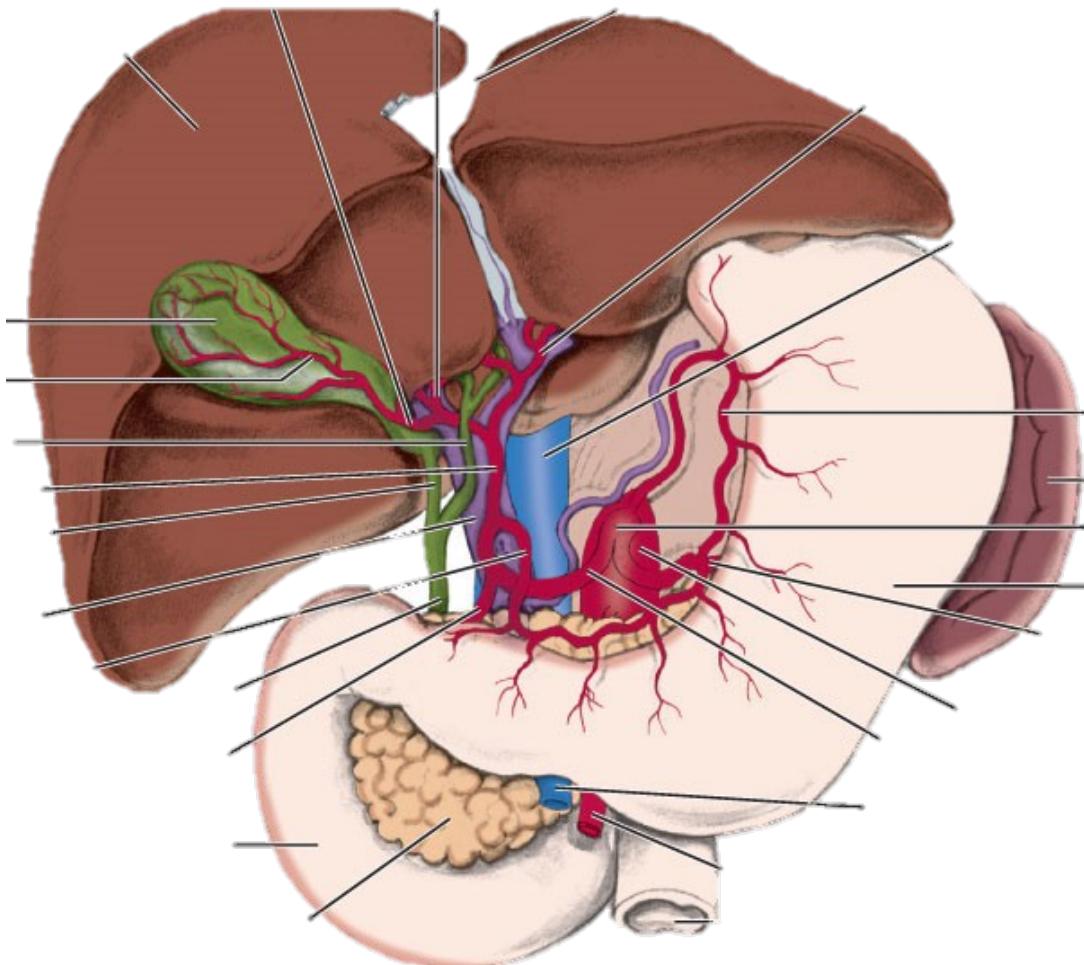
# Gall bladder

**lateral end the neck** widens out. in clinical practice, this widening is often referred as '**Hartmann's pouch**'.

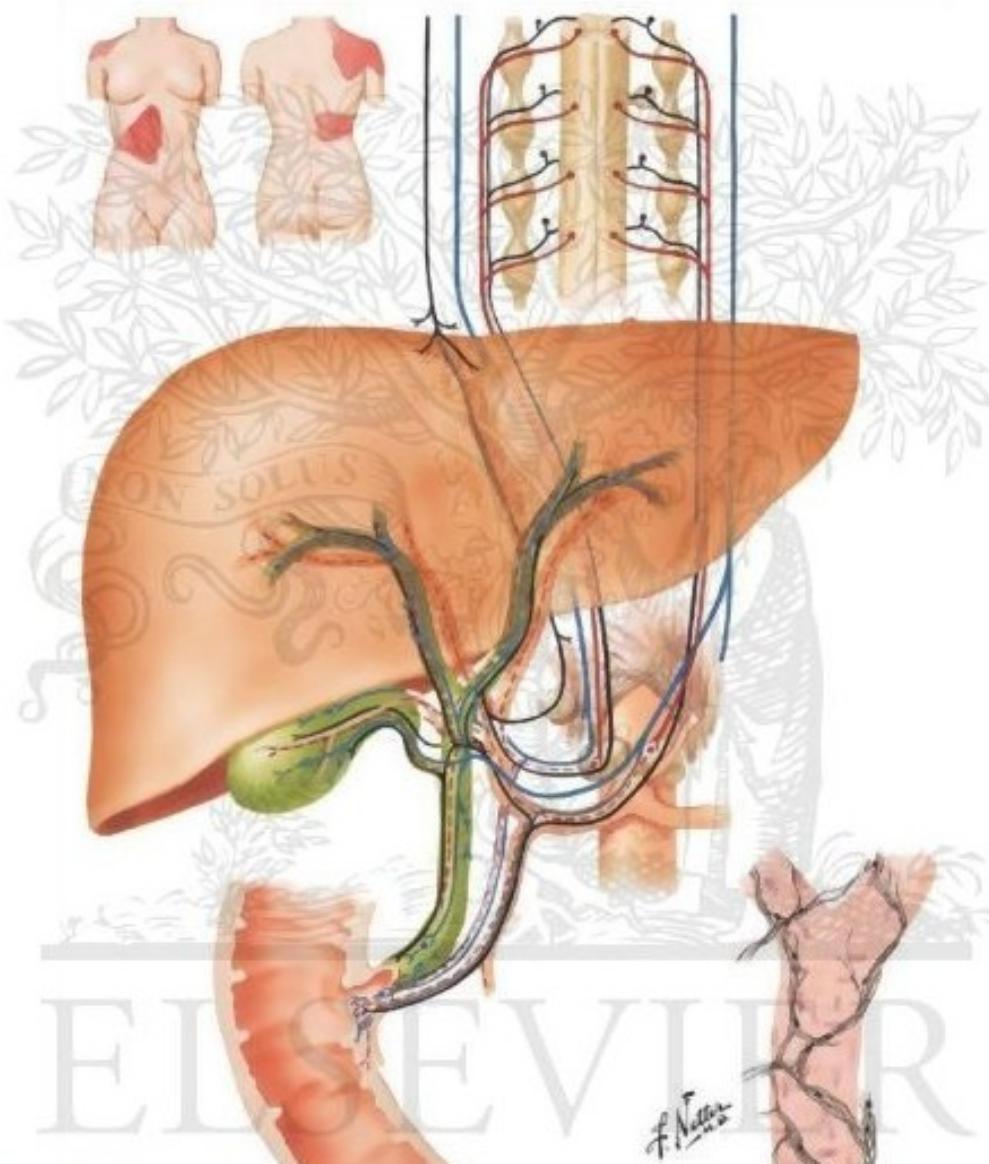


# *Blood supply of the gall bladder*

**cystic artery**



# Nerve supply of the gall bladder



**3 types of innervation**

which course with the cystic artery.

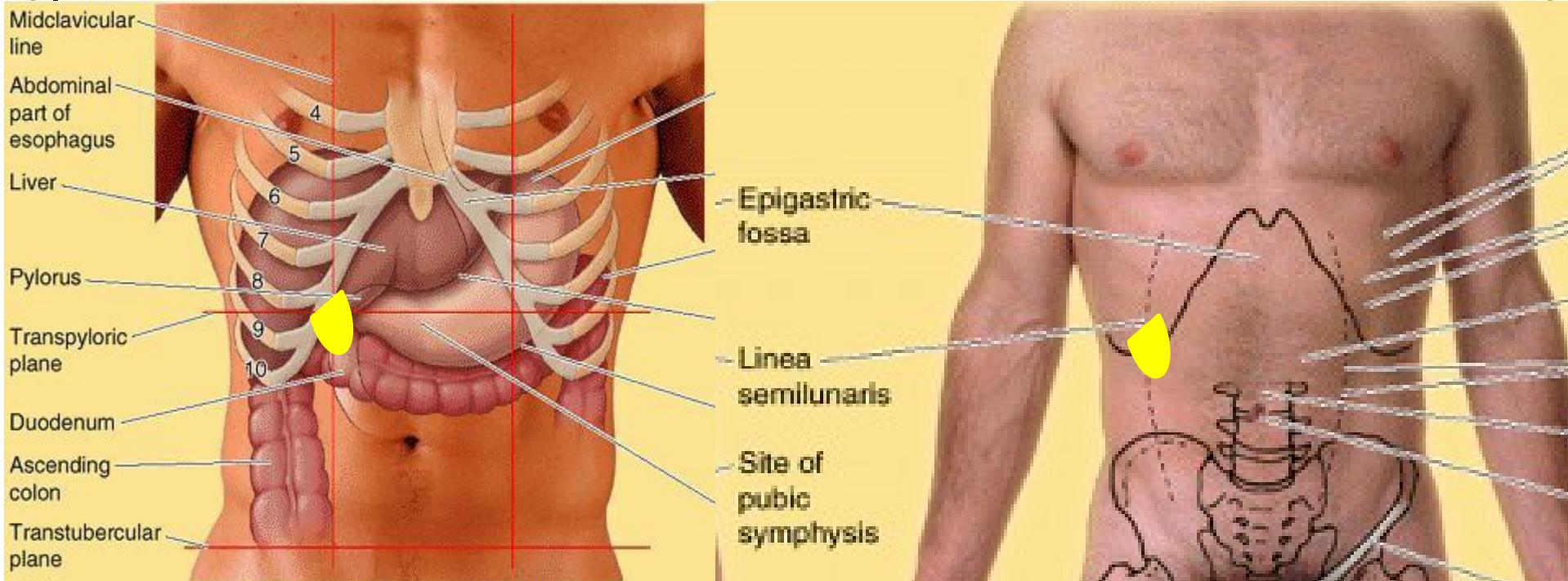
**The celiac plexus**  
supplies  
**sympathetic innervation**

**the vagus nerve**  
supplies  
**parasympathetic**

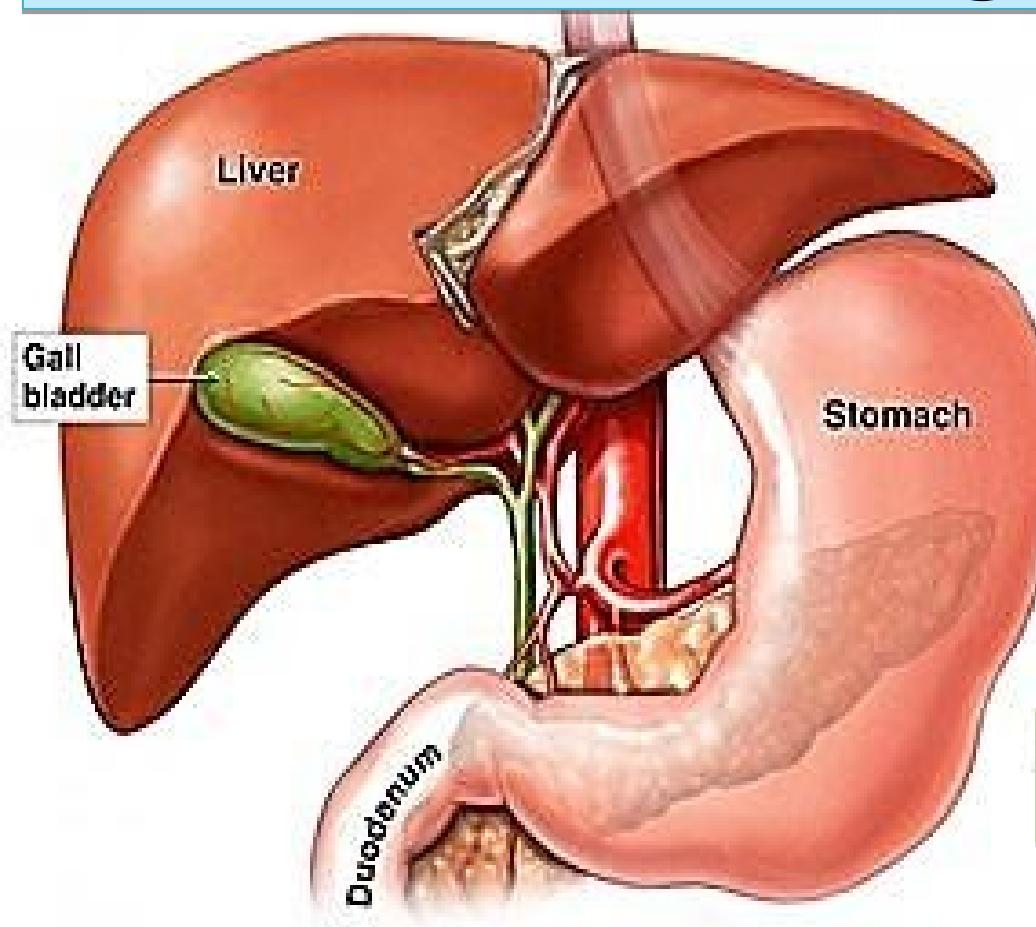
# Surface anatomy of the gall bladder

**“tip of the Rt. 9th costal cartilage”**

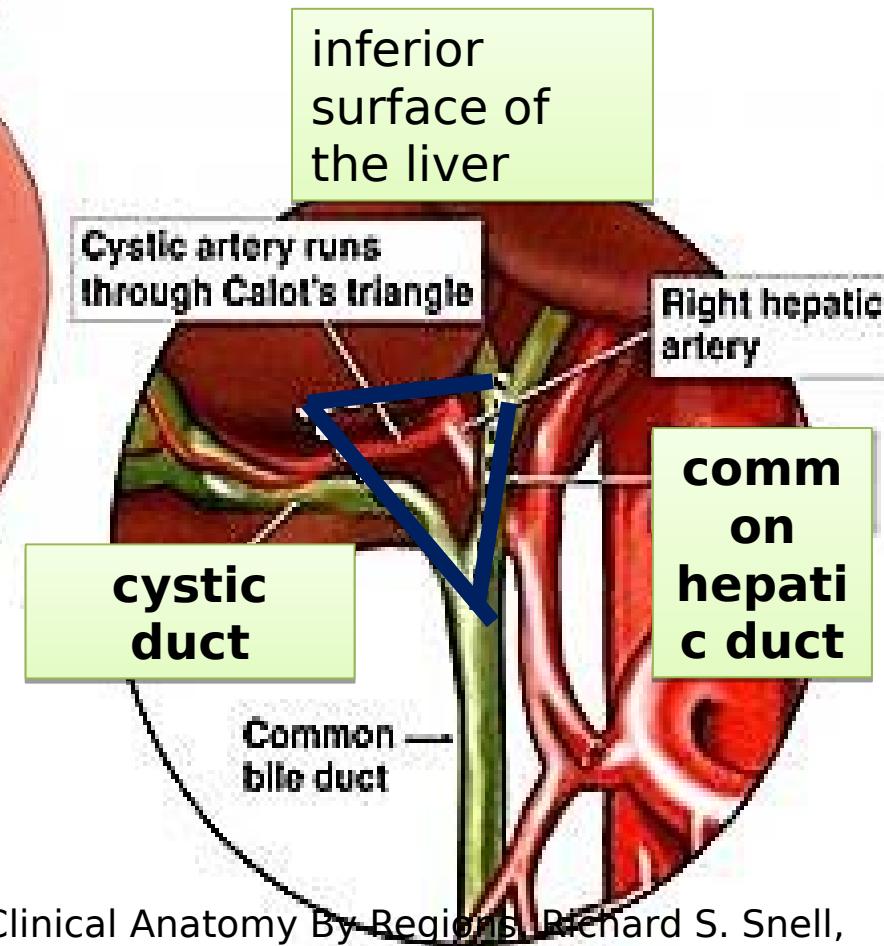
where the lateral edge of right rectus abdominis (linea semilunaris) crosses the costal margin in transpyloric plane (L1)



# Cystohepatic triangle (Calot triangle)

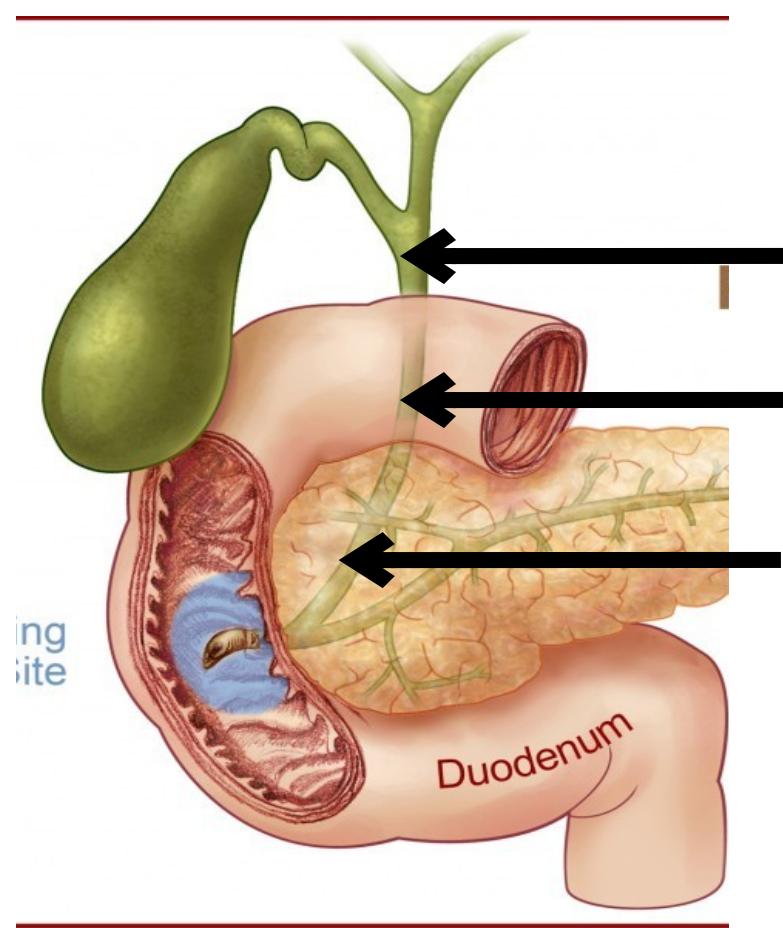


Anterior view



# Common Bile Duct

It is formed near the porta hepatis by the junction of the cystic and common hepatic ducts



## The upper third

(supraduodenal )  
( in lesser  
omentum)

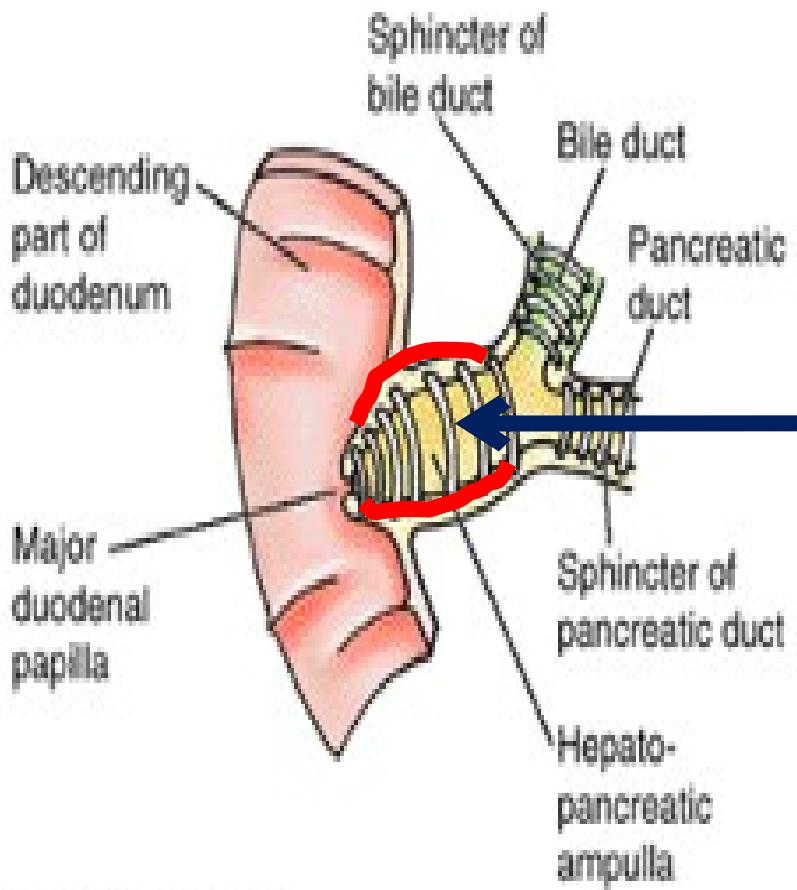
## The middle third

(retroduodenal )

## The lower third

# Bile duct

It opens into the **2<sup>nd</sup> part of the duodenum**. It unites with the **main pancreatic duct** to form the **hepatopancreatic ampulla**

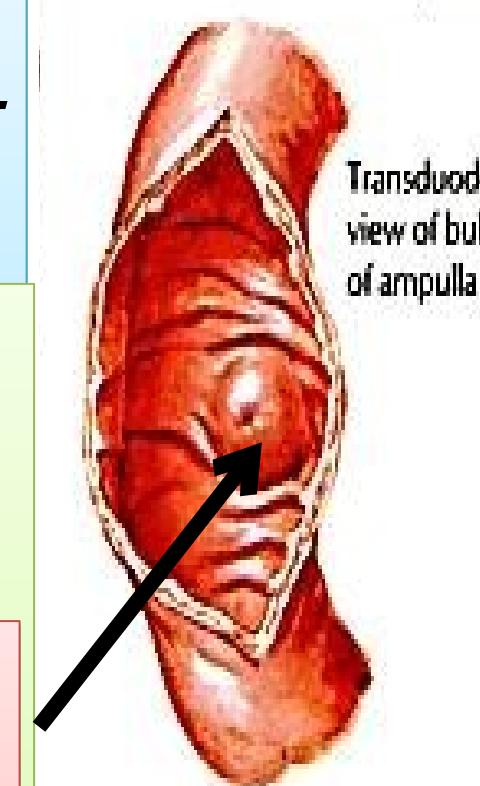


*the  
hepatopancreat  
ic ampulla  
ampulla of*

**Sphincter of  
Oddi**

Circular muscle  
surrounds

**Major  
duodenal  
papilla**



# GOOD LUCK